Abstract

A system and method for programmatically generating a graphical program in response to state diagram information. The state diagram information may specify a plurality of states and state transitions, wherein each state transition specifies a transition from a first state to a second state. A graphical program generation program (GPG program), may receive the state diagram information and automatically, i.e., programmatically, generate a graphical program (or graphical program portion) based on the state diagram information. The GPG program may programmatically include graphical source code in a block diagram of the graphical program, which may serve as a framework of the states specified by the state diagram information and the state transitions among the states. The graphical source code framework automatically generated by the GPG program may include various "placeholders" or "containers" enabling the user to easily fill in the graphical program with source code that specifies execution instructions for each state and Boolean conditions for each state transition. The specific graphical source code that is automatically generated may depend on programming features supported by a particular graphical programming development environment with which the graphical program is associated. Examples of generating graphical source code for the LabVIEW graphical programming development environment are included. In one embodiment, the graphical program may be dynamically (programmatically) updated as the state diagram is being interactively constructed by the user. I.e., as the user performs various actions in a state diagram editor, such as adding or deleting states, adding or deleting transitions, etc., the corresponding graphical program may be dynamically (programmatically) updated to reflect the change.